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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712,104

11/14/2003

Peter Rabinovitch

3465-Z

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7590
Law Office of Jim Zegeer
Suite 108
801 North Pitt Street
Alexandria, VA 22314

04/07/2008

EXAMINER

POLLACK, MELVIN H

ART UNIT

PAPER NUMBER

2145

MAIL DATE

DELIVERY MODE

04/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/712,104	Applicant(s) RABINOVITCH, PETER	
	Examiner MELVIN H. POLLACK	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19,21-26 and 28-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19,21-26 and 28-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>see attached office action</u> . |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 02 January 2008 have been fully considered but they are not persuasive. An analysis of the arguments is provided below.
2. Examiner withdraws the objection to the abstract in light of the amendment.
3. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the purpose of the invention is to "provide a low-cost router that is flexible and scaleable in routing capacity and port counts (P. 13, lines 14-15)") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). While some of the limitations in claims 1 and 20 may hint at such a purpose, these limitations need to be clarified.
4. Clarifications are also required for items that may have enablement issues. In particular, it is unclear whether the result of "providing a reduction" is sufficiently enabled with regard to its tangibility and functionality. It is also unclear as to what constitutes a special purpose router entails as opposed to a normal router. Applicant may have also failed to enable what and how a router cluster node may comprise a personal computer platform providing flexibility and cost savings in the development, deployment, maintenance, and expandability of the cluster router.
5. For the purposes of this action, the examiner will define such terms as broadly as reasonable. Applicant should consider amending the specification in regards to any potentially incorrect interpretations.

6. Applicant argues that router cluster nodes 700a, 700b, and 700c are indistinguishable, and therefore, none of them can be a special purpose node (P. 15, lines 14-21). Presuming this to be true for the sake of advancing prosecution, the applicant fails to note that router cluster 800 also includes a special node 802, with components 804 and 806. Such a node is compared with Fig. 2, wherein "in step 202 a distribution identifier is calculated for a data packet... and in step 204 the data packet is handled in that node of said network element cluster, to which node the distribution identifier belongs (col. 8, lines 10-20)." More specifically, "the network element cluster 800 further comprises means 802 for allocating/reallocating to each node belonging to said network element cluster certain node-specific distribution identifiers, each node having separate node-specific identifiers allocated to it.... The cluster further includes means 804 for load balancing and means 806 for node monitoring.... Means 802, 804 and 806 may be implemented as a part of one of the nodes, or they may be included in a separate device (col. 17, lines 7-23)." Said citations also rebut the applicant's argument that Syvanne does not show a "provisioned router-cluster-node-centric configuration distributed to each router cluster node" to help in distributing packet routing, and that Syvanne fails to show a packet processing flow (P. 16, lines 4-23).

7. Applicant further argues that, in regards to claims 3 and 17, applicant does not expressly disclose that each router cluster node comprises a "personal computer platform (P. 16, lines 1-2)." The examiner interprets this term in the broadest reasonable interpretation, and in light of the potential enablement, wherein there must be a client somewhere in the node. However, this is at least inherent, since the routing of packets indicates that there must be at least one

transmitter and one receiver. Such a limitation is taught in Fig. 1A, which must be used to properly view Figs. 2 and 8.

8. Therefore, the rejection is maintained for the reasons above, and is final.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-4, 7, 12-20, and 25-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Syvanne (7,146,421).

11. Syvanne teaches a method and system (abstract) of providing a collection of nodes to perform routing (col. 1, line 1 – col. 7, line 50) via a variety of connections and configurations (col. 16, line 20 – col. 18, line 5), wherein packets are distributed based on a tag within a packet header (col. 7, lines 45-65; col. 11, lines 15-55) to create load balancing (col. 8, lines 1-20). In particular, functional blocks are routed based on tags (col. 8, lines 20-55), with backups produced for resiliency to failure (col. 8, lines 55-60), and thus producing a routing capacity of type $O(N)$ (col. 9, lines 3-65).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2145

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 5, 6, 11, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Syvanne as applied to claim 1 and 17 above, and further in view of Wirth et al. (7,170,895).

14. Syvanne does not expressly disclose a toroidal, 3-dimensional, bus topology. Wirth teaches a method and system (abstract) of network switching nodes (col. 1, line 1 – col. 6, line 45; col. 16, line 55 – col. 17, line 20) that teaches this limitation (col. 6, line 45 – col. 9, line 40, esp. col. 7, lines 10-30). At the time the invention was made, one of ordinary skill in the art would have combined the inventions in order to provide further fault tolerance (col. 1, lines 50-60).

15. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Syvanne as applied to claim 1 above, and further in view of Dinker et al. (7,239,605).

16. Syvanne does not expressly disclose the usage of manager backup nodes, although it does disclose a backup node system (see above). Dinker teaches a method and system (abstract) of providing to a cluster node topology a backup process (col. 1, line 1 – col. 4, line 50; col. 12, line 60 – col. 13, line 5) in which the limitations are disclosed (col. 4, line 50 – col. 8, line 20). At the time the invention was made, one of ordinary skill in the art would have added Dinker in order to ensure self-healing in times of high demand (col. 1, lines 35 – 60).

17. Claims 10 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Syvanne as applied to claims 1 and 17 above, and further in view of Colrain et al. (7,069,317).

18. Syvanne does not expressly disclose configuring and reporting out of band. Colrain teaches a method and system (abstract) of node management (col. 1, line 1 – col. 4, line 30; col. 12, lines 63 - 67) wherein changes and notifications are made out of band (col. 4, line 30 – col. 5, line 5). At the time the invention was made, one of ordinary skill in the art would have combined the inventions in order to better handle system failures (col. 2, lines 15-25).

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELVIN H. POLLACK whose telephone number is (571)272-3887. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. H. P./
Examiner, Art Unit 2145
31 March 2008

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2145